

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion is respectfully requested.

Claims 1-10 and 12 are currently pending in the application. Claims 1, 3, 4, 6-10 and 12 are amended; and Claims 2, 11 and 13 are canceled by the present amendment. The subject matter of canceled Claims 2 and 13 have been incorporated into independent Claims 1 and 12, respectively. Claims 1, 3, 4, 6-10 and 12 have also been amended to correct minor informalities. Thus, no new matter is presented.

In the outstanding Official Action, Claims 1-4 and 11-13 were rejected under 35 U.S.C. § 103(a) as anticipated by Lindsay et al. (U.S. Patent Publication No. 2002/0009070, hereinafter "Lindsay") in view of Ida et al. (U.S. Patent Publication No. 2002/0082036, hereinafter "Ida"); and Claims 5-10 were rejected under 35 U.S.C. § 103(a) as unpatentable over Lindsay in view of Ida, and in further view of Raith (U.S. Patent No. 6,711,408, hereinafter "Raith").

The Official Action has rejected Claims 1-4 and 11-13 under 35 U.S.C. § 103 as being unpatentable over Lindsay in view of Ida. The Official Action cites Lindsay as disclosing the Applicants' invention with the exception of a communication control apparatus reserving wireless resources of a selected handover destination candidate. The Official Action cites Ida as disclosing this limitation and states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references to arrive at the Applicants' claims. Applicants respectfully traverse this rejection.

Amended Claim 1 relates to a handover control method used in a mobile communication system which includes a plurality of base stations, at least one mobile station, and a control apparatus controlling the connection between the base stations and the mobile station. The mobile station is able to handoff between base stations when a communication

quality value between the base station and the mobile station falls below a first threshold. The control apparatus selects at least one handover destination candidate from among a plurality of base stations and reserves the resources of at least one of the selected handover destination candidate. The control apparatus then notifies the mobile station of a handover destination candidate for which resources are reserved and the mobile station switches base stations based on the information received from the control apparatus when the communication quality value falls below the first threshold.

In the conventional method, the wireless resource of the base station of the handover destination is not considered; therefore, when a request for a handover is sent to a base station the communication may be forcefully disconnected due to a lack of resources.<sup>1</sup> The method disclosed in amended Claim 1 avoids this problem by reserving the resources in the destination base station before handover is performed.<sup>2</sup>

Amended Claim 1 recites, *inter alia*, a handover control method, comprising:

“...said communication control apparatus reserving wireless resources of said at least a handover destination candidate communication apparatus which is selected;  
said communication control apparatus notifying said mobile station of a handover destination candidate communication apparatus for which wireless resources are reserved in said at least a handover destination candidate communication apparatus ...”

Lindsay describes a communication system with fast control traffic. Specifically, Lindsay describes a method for handing off communication between base stations using a time division multiple access (TDMA) system. In Lindsay's system a continuous sequence of time frames is generated from a base station used to communicate with each of the plurality of mobile stations. The mobile station desiring a handoff to another base station exchanges a plurality of control traffic messages with a second base station to establish

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<sup>1</sup> Specification at page 3, lines 2-8.

<sup>2</sup> Specification at page 4, line 34 through page 5, line 3.

communication in a different time slot with the second base station. The mobile station then releases a communication channel with the first base station and requests, through the second base station, the transfer of the call to the second base station.<sup>3</sup> The decision to switch communications between various base stations is made based on received signal strength of a signal from the current base station at the mobile station and the decision to switch to a specific base station depends on the strength of the signal received from those base stations.<sup>4</sup> No control apparatus is involved.

Ida describes a mobile communication system and method for controlling transmission power. More specifically, Ida describes a method for performing soft handover in a code division multiple access (CDMA) mobile communication system.<sup>5</sup> Ida describes a method for performing a “soft handover” by allowing the base transceiver station host equipment 4 to determine the better base station for communications based on the magnitude levels of the reception of the signals from the base transceiver stations 2 at the mobile station 3. At the time of switching, the same data is transmitted from the current and destination base station transceivers to the mobile station.<sup>6</sup>

The requirements for a *prima facie* case of obviousness are (1) there must be some suggestion or motivation in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine the reference teachings, (2) there must a reasonable expectation of success, and (3) the prior art reference must teach or suggest all the claim limitations. It is respectfully submitted that the outstanding Official Action fails to make a *prima facie* case of obviousness, because Lindsay nor Ida either alone nor in combination teach or suggest all the limitations recited in amended Claim 1.

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<sup>3</sup> Lindsay at paragraph [0016].

<sup>4</sup> Lindsay at paragraph [0230].

<sup>5</sup> Ida at paragraph [0050].

<sup>6</sup> Ida at paragraph [0053].

Amended Claim 1 recites the communication control apparatus notifies the mobile station of a handover destination candidate communication apparatus for which wireless resources are reserved in said at least a handover destination candidate communication apparatus. As discussed above, Lindsay describes that the mobile station, based on received signal strength, determines a handover base station candidate and accesses this candidate by sending signals in empty time slots to this base station.<sup>7</sup> Therefore, Lindsay fails to teach or disclose any reservation of resources of a base station handover candidate. Ida describes that the base transceiver station host equipment 4 determines the appropriate base station to which communications should be transferred.<sup>8</sup> However, Ida fails to teach or suggest that any communication resources are reserved by the transceiver host equipment 4. Thus, neither Ida nor Lindsay describe that a communication control apparatus notifies a mobile station of a handover destination candidate communication apparatus for which wireless resources are *reserved* in the base station handover candidate.

As stated above, the Official Action admits that Lindsay is deficient in describing a communication control apparatus reserving wireless resources of a selected handover destination candidate communication apparatus. In order to remedy the deficiencies of Lindsay the Official Action relies on Ida. Applicants respectfully submit that Ida fails to describe the claim limitation for which it is asserted.

Amended Claim 1 recites the communication control apparatus reserving wireless resources of said at least a handover destination candidate communication apparatus which is selected. Ida describes that a handover is mainly determined by the base transceiver station host equipment 4 in accordance with the magnitude of the levels of reception of the signal from the base transceiver stations 2 at the mobile station 3.<sup>9</sup> As stated above, Ida may

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<sup>7</sup> Lindsay at paragraphs [0016] and [0230].

<sup>8</sup> Ida at paragraph [0053].

<sup>9</sup> Ida at paragraph [0053].

describe that the transceiver host equipment determines the best candidate for handover; however Ida fails to teach or disclose that any wireless resources are reserved. Thus, Ida fails to teach or disclose that the control apparatus reserves wireless resources of the handover destination candidate, as recited in amended Claim 1.

Accordingly, Applicants respectfully request the rejection of Claim 1 under 35 U.S.C. § 103 be withdrawn. For substantially the same reasons as given with respect to amended Claim 1, it is also submitted that amended Claim 12 patentably defines over the prior art of record.

As discussed above, Lindsay neither alone nor in combination with Ida, disclose or suggest applicants method of a communication control apparatus reserving wireless resources of said at least a selected handover destination candidate communication apparatus. Likewise, Raith does not remedy this deficiency, and therefore, none of the cited references, either alone nor in combination, teach or disclose Applicant's Claims 5-10 which include the above-distinguished limitation by virtue of dependency. Therefore, the Official Action does not provide a *prime facie* case of obviousness with regard to any of these claims.

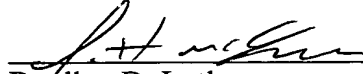
Accordingly, Applicant respectfully requests that the rejection of Claims 5-10 under 35 U.S.C. §103(a) be withdrawn.

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Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1, 3-10 and 12 is patentably distinguishing over the prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

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